

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1, 2 and 4-12 remain pending in the application subsequent to entry of this Amendment.

As a preliminary matter, please note the Information Disclosure Statement filed November 9, 2009 which is subsequent to the mailing date of the current Official Action.

Claim 1 is amended to specify that at least a portion of the exhaust gas is already in an excited state **before** the exhaust gas is introduced into an excitation unit. In the current Official Action, all pending claims stand rejected as being unpatentable/"obvious" over the disclosures of Rostaing et al US 5,993,612 in view of the German patent to Breitbarth et al. Applicants' claims are fully distinguished from the disclosures of Rostaing either considered by itself or in combination with the secondary reference and applicants request that the rejection be withdrawn and that all pending claims be allowed.

This application was the subject of discussions between the undersigned and Examiner Nguyen on November 9 and 13, 2009. During these discussions the examiner mentioned her awareness of US patent 5,965,786 also to Rostaing which is different from the '612 Rostaing reference already of record.

During these discussions the examiner directed attention to Figure 9 of Rostaing '786 which she regarded as potentially being relevant to the amendment made to claim 1, namely where at least a portion of the exhaust gas is already in an excited state before the exhaust gas is introduced into an excitation unit. The purpose of this amendment is to make the Rostaing '786 patent of record in this application and to point out how applicants' claims differ from the disclosures of that document.

In the present invention, an exhaust gas, which is discharged from production equipment, such as semiconductor manufacturing facility, is directly introduced into an excitation unit. Since the exhaust gas is already partially-excited when it is discharged from the production equipment and introduced into the excitation unit, it is possible to use less energy to maintain the exhaust gas at an excited state. For example, in the case of treating the exhaust gas at the rate of 1 liter/minute, although the amount of energy required to generate plasma according to the present invention is about 1.5 kW, the amount of energy required when degrading exhaust gas at the rate of 1 liter/minute by again generating plasma under reduced pressure after tentatively

discharging at atmospheric pressure using the invention disclosed in Japanese Patent Unexamined Application, First Publication No. H10-277354 was 5.5 kW. From this it will be seen that the method of the present invention makes it possible to reduce the amount of energy required for plasma generation to about 30% of that of the prior art.

The examiner asserts that the above-described technical feature is disclosed in Figure 9 of the Rostaing reference ('786). This is not the case.

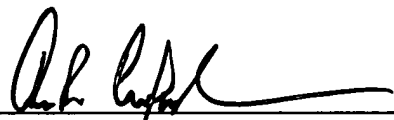
When carefully examined, in Figure 9 the Rostaing reference ('786) merely discloses that two plasma generator stages 100 and 102, each associated with a corresponding discharge tube are arranged in series. It does not disclose that at least a portion of the exhaust gas is already in an excited state before the exhaust gas is introduced into an excitation unit.

Therefore, none of the cited references disclose the above-described technical features, and therefore, even combining the cited references cannot reach the present invention.

Should the examiner require further information, please contact the undersigned.

Respectfully submitted,

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